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EXAMINER

JORGENSEN, LELAND R

ART UNIT PAPER NUMBER

2675

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*Office Action Summary*

Application No.

10/626,576

Applicant(s)

MENDELSON ET AL.

Examiner

Leland R. Jorgensen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 070104.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, 9, 12, 14, 16, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al., USPN 6,169,539 B1.

### **Claims 1, 9, 12, and 20**

Lee teaches an adapter for a liquid crystal display capable of displaying images in response to signals of a plurality of signal formats. Lee, col. 1, lines 6 – 9. The adapter [video signal selection circuit] comprises a controller [data selection portion 100, synchronous signal selection portion 200, mode selection portion 300, and priority channel selection portion 400] that is coupled to a plurality of image data interfaces [first data signals R1, G1, and B1 and synchronous signals HS1 and VS1 and second data signals R2, G2, and B2 and synchronous signals HS2 and VS2]. The control receives a request to display an image [horizontal synchronous signal HS1] to display an image from a processor in one of a plurality of signal formats. The controller [in priority channel selection portion 400], based on that request, selects one of the plurality of image data interfaces according to preference variables [first detection signal DET1] associated with each of the plurality of image data interfaces when the plurality of

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image data interfaces are operating simultaneously. Each preference variable [DET1 or DET2] indicates a relative priority. The control sends a response data structure [R,G, B data and Vs, Hs Signal] that indicates the selected image data signal format. The controller receives image data from the processor if the processor supports the selected image data signal format. Lee, col. 1, lines 16 – 40; col. 5, line 10 – col. 6, line 59; col. 10, lines 32 – 37; and figure 1.

#### **Claims 3 and 14**

Lee teaches that a first and a second of the plurality of image data interfaces are elements of a display interface. Lee, col. 1, lines 16 – 40; col. 5, line 10 – col. 6, line 59; col. 10, lines 32 – 37; and figure 1.

#### **Claims 5 and 16**

Lee teaches that the preference variables indicates a relative priority of an image data signal format associated with the corresponding image data interface. Lee, col. 5, lines 43 – 58; col. 10, lines 32 – 35.

3. Claims 9, 11, 20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al., USPN 6,329,981 B1.

#### **Claims 9 and 20**

Lin teaches a method of establishing operation between a processor and a display or a display adapter. Lin teaches detecting a plurality of operating image data interfaces, identifying the format of each of the plurality of image data interfaces, and selecting one of the plurality of image data interfaces. Lin, col. 1, lines 15 – 18, col. 2, lines 60 – 63; col. 6, line 52 – col. 7, line 12; col. 17, lines 20 – col. 18, line 32; and figures 2 and 9 - 15.

**Claims 11 and 22**

Lin teaches the selecting step comprises the step of automatically choosing one of the plurality of image data interfaces according to preference variables associated with each of the plurality of image data interfaces. Lin, col. 1, lines 15 – 18, col. 2, lines 60 – 63; col. 6, line 52 – col. 7, line 12; col. 17, lines 20 – col. 18, line 32; and figures 2 and 9 - 15.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., in view of Odryna et al., USPN 6,333,750 B1.

**Claims 2 and 13**

Lee teaches a first and a second of a plurality of analog image data interfaces. Lee, col. 1, lines 16 – 40.

Lee does not teach that the second data channel is a digital screen data channel.

Odryna teaches a video data hub that can receive and select either analog or digital video data. Odryna, col. 3, line 15.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the video data hub that can receive and select either analog or digital video data as

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taught by Odryna with the display and display adapter controller as taught by Lee. Odryna invites such combination by teaching,

In addition to the need to selectively and independently provide a large quantity of video data on several video display terminals, it is desirable to merge plural video data sources of varying formats into a single video data stream, and to make that integrated data stream selectively and independently available to a variety of video display devices, including devices having varying requirements for input video data format.

Odryna, col. 1, line 66 – col. 2, line 6. Odryna adds,

Video data input to the hub can be either digital or analog. Digital input can be via a standard PANELLINK.TM. electrical interface such as the DFP standard defined by the Digital Flat Panel Initiative, via some derivative of that standard, via a custom PANELLINK.TM. format, or via the VESA-standard plug-in display format. Further, digital input can be presented as a digitized version of the output of a standard graphics adapter board commonly found in personal computers, which normally provides an RGB, or red, green, blue analog signal, along with one of various synchronization signal formats. Buffered digital video data can also be provided as an input, for instance from another hub. Additionally, the digital input can be a serialized digital input which provides graphics commands for the generation of an image, as opposed to the provision of the digital image data itself. Analog inputs to the hub can include a variety of video input formats, such as RGB, NTSC, PAL, SECAM, or other broadcast, or baseband composite, video (BVIDEO) format. A significant capability provided by the hub lies in the ability to provide an interface for a wide variety of digital or analog inputs, whether presently known or identified in the future, as required by the particular application.

Odryna, col. 3, lines 15 – 36.

#### **Claims 4 and 15**

Odryna teaches that the display interface complies with an RGB and other video standards. Odryna, col. 3, lines 30 – 34.

6. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., in view of Van Court, USPN 5,917,552.

### **Claims 6 and 17**

Lee does not teach that the preference variables indicates one or more performance metrics associated with the quality of image data signals received from the corresponding image data interface.

Van Court teaches a system to detect input video signals from different types of video sources. Van Court, col. 1, lines 6 - 17. Van Court teaches that that the preference variables indicates one or more performance metrics associated with the quality of image data signals received from the corresponding image data interface. Van Court, col. 2, lines 7 – 51; col. 29, lines 19 - 30.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the preference variables as taught by Van Court with the display and display adapter controller as taught by Lee to allow the user to save tuning settings. Van Court invites such combination by teaching,

User adjustable tuning settings are used to set non-critical control parameters and are utilized in combination with the measured signal characteristics to process input video signals and display the processed signals on a video display unit, such as a flat panel display. To this end, a first memory table stores names and associated characteristics of known video sources and a second memory table stores measured characteristics of processed video signals unknown to the system before processing. Tuning settings are also stored in the first and second memory tables, in association with each entry. Initially, the stored tuning settings are set to default values. Subsequently, a user is able to vary the tuning settings, such as brightness, contrast and centering, causing the corresponding memory entry to be updated.

Van Court, col. 2, lines 7 – 20.

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7. Claims 7, 8, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., in view of Van Court as applied to claims 6 or 17 above, and further in view of Jeong et al., USPN 6,028,646.

### **Claims 7 and 18**

Neither Lee nor Van Court teach that the performance metrics includes color quality.

Jeong teaches that that the performance metrics for a video display includes color quality.

Jeong, col. 1, lines 12 – 19.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine color quality as taught by Jeong with the preference variables for a display and display adapter controller as taught by Van Court and Lee. Jeong invites such combination by teaching,

The present invention relates to a color image enhancement technique for a video display appliance. In particular, the present invention relates to a color image enhancement device for a video display appliance which can improve the sharpness of the color image by converting the primary color image of red (R), green (G), blue (B) into a color model of luminance (L), hue (H), saturation (S) and then utilizing the LHS components.

Jeong, col. 1, lines 12 – 19. Jeong adds,

Generally, in order to improve the sharpness of the image displayed on the video display appliance, the luminance component, which is an intrinsic color characteristic of the color image signal of an RGB color model, is used. The luminance component represents the amount of light received by the human eye without considering the color component. However, the luminance component cannot be directly detected from the image of the RGB color model, but can be detected from the image of the LHS (Luminance, Hue, Saturation) color model converted from the RGB color model.

Jeong, col. 1, lines 21 – 31.



**Claims 8 and 19**

Jeong teaches that the performance metrics includes image saturation. Jeong, col. 1, lines 12 – 19.

8. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al.

**Claims 10 and 21**

Lin teaches a method of establishing operation between a processor and a display or a display adapter. Lin teaches detecting a plurality of operating image data interfaces, identifying the format of each of the plurality of image data interfaces, and selecting one of the plurality of image data interfaces. Lin, col. 1, lines 15 – 18, col. 2, lines 60 – 63; col. 6, line 52 – col. 7, line 12; col. 17, lines 20 – col. 18, line 32; and figures 2 and 9 - 15.

Lin does not specifically state that the method further comprises the step of updating the image data interface selection.

It would have been obvious to one of ordinary skill in the art at the time of the invention to update the image selection method of Lin to add new display formats as such formats are developed. Lin invites such combination by teaching,

Since the present invention enables the automatic detection of a resolution of video data, the invention allows any particular flat panel display unit to function with any one of various computer units having graphics cards that can generate different video modes with standard and non-standard timing. Thus, the end user will be able to integrate a particular flat panel display unit with any one of various computer units with less difficulty and without the need to know the particular graphics card in the user's computer unit. The end user will also be able to integrate various flat panel display units with a particular computer unit.

Lin, col. 3, lines 17 – 27. Lin adds,

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Thus, the circuit and method discussed above permit the automatic detection of the video modes of different graphics card in a computer unit. The range and number of video modes that may be detected by the present invention is variable.

Lin, col. 18, lines 27 – 31. Lin then adds,

The present invention also advantageously permits the automatic detection of the video mode of a signal so that the number of the pixels is properly set in a flat panel display unit. Since the present invention enables the automatic detection of video mode values of different graphics cards, the invention allows any particular flat panel display unit to function with any one of various computer units having graphics cards with different video modes. Thus, the end user will be able to integrate a particular flat panel display unit with any one of various computer units with less difficulty. The end user will also be able to integrate various flat panel display units with a particular computer unit.

Lin, col. 19, lines 20 – 31. Lin concludes,

While the present invention has been described with reference to certain preferred embodiments, those skilled in the art will recognize that various modifications may be provided. For example, while the video mode detection circuit in accordance with the present invention has been described as being implemented in a personal desktop computer system, the above video mode detection circuit may also be implemented in other types of computer systems such as workstations and portable computer systems. In addition, the above video mode detection circuit is capable of operating with other types of flat panel display units such as gas-plasma display units and electroluminescent display units.

Lin, col. 21, lines 29 – 41.

### ***Conclusion***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland R. Jorgensen whose telephone number is 703-305-2650. The examiner can normally be reached on Monday through Friday, 7:00 a.m. through 3:30 p.m..

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER